

Message

From: Iyer, Shoba@OEHHA [Shoba.Iyer@oehha.ca.gov]
Sent: 8/15/2017 11:04:45 PM
To: Martin, Matthew [Matthew.Martin@pfizer.com]; Judson, Richard [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=606e6d5b34c84834b2f48f4563115e26-Judson, Richard]
CC: Linnenbrink, Monica [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=01f59a3f644b4c4eb2b74561b4b654d1-Linnenbrink, Monica]; Pham, LyLy [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=27e148789f5a42969dea7f70fd329549-Pham, LyLy]
Subject: RE: Tanguay lab data on dashboard- Activity Score

Thanks so much for the information, Richard and Matt. I appreciate it!

- Shoba

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From: Martin, Matthew [mailto:Matthew.Martin@pfizer.com]
Sent: Tuesday, August 15, 2017 2:24 PM
To: Judson, Richard <Judson.Richard@epa.gov>; Iyer, Shoba@OEHHA <Shoba.Iyer@oehha.ca.gov>
Cc: Linnenbrink, Monica <Linnenbrink.Monica@epa.gov>; Pham, LyLy <Pham.LyLy@epa.gov>
Subject: RE: Tanguay lab data on dashboard- Activity Score

Richard and Shoba,
Based on my recollection, that sums it up pretty well for the individual endpoints.
The overall activity score, instead of being a fraction of fish (wells) with an observed endpoint it was the sum of observed endpoints per fish (well) with mortality being assigned an arbitrary top end value of 100.
The data was scaled from 0-100 with 100 being dead and values >0 and <100 being the prevalence of malformations).
To avoid zero-variance in the fitting routine, 5% noise was added to the dataset (the curve-fitting would not like having 5 zero values followed by 5 100 values).

```
agg <- dat[!is.na(val) , list(rval = sum(val, na.rm = TRUE)/.N * 100
                             #, cval = sum(val, na.rm = TRUE)
                             #, nval = .N
                             ),
          by = list(spid,acsn,apid,wllq,wllt,conc,srcf)]
```

Hope this helps.
Matt

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MATT MARTIN, PhD

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"IT'S TOUGH TO MAKE PREDICTIONS,

ESPECIALLY ABOUT THE FUTURE." -- YOGI BERRA

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**From:** Judson, Richard [<mailto:Judson.Richard@epa.gov>]

**Sent:** Tuesday, August 15, 2017 5:13 PM

**To:** [Shoba.Iyer@oehha.ca.gov](mailto:Shoba.Iyer@oehha.ca.gov)

**Cc:** Linnenbrink, Monica; Martin, Matthew; Pham, LyLy

**Subject:** [EXTERNAL] RE: Tanguay lab data on dashboard- Activity Score

Hi Shoba – sorry for not getting back to you – we’ve had one of our periodic avalanches of emails demanding attention, and yours got buried.

I’m setting out here what I think the process was, but ccing a couple of others who can maybe correct me.

The original data consisted of multiple wells per chemical / concentration pair, with one fish per well. The response for each chemical / concentration was the fraction of fish effected for each endpoint.

There were no tcpl methods assigned at levels 2 and 3 (data was not transformed or otherwise scaled). At level 5, 5\*Bmad was used as the hit-calling cutoff.

Some summation of the raw data was used to come up with the overall developmental toxicity endpoint, equivalent to what the Padilla lab used – I do not know the details of this.

Hopefully this is the type of information you’re looking for

Richard

Richard Judson, Ph.D.

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**From:** Iyer, Shoba@OEHA [<mailto:Shoba.Iyer@oehha.ca.gov>]

**Sent:** Monday, August 14, 2017 6:53 PM

**To:** Judson, Richard <[Judson.Richard@epa.gov](mailto:Judson.Richard@epa.gov)>

**Cc:** Linnenbrink, Monica <[Linnenbrink.Monica@epa.gov](mailto:Linnenbrink.Monica@epa.gov)>

**Subject:** FW: Tanguay lab data on dashboard- Activity Score

Hi again Richard,

Just re-sending my earlier email request for an explanation of how the Tanguay lab Activity Score data displayed on the ToxCast dashboard were generated.

Thanks much,  
Shoba

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**From:** Iyer, Shoba@OEHHA  
**Sent:** Wednesday, August 02, 2017 1:30 PM  
**To:** 'Judson.Richard@epa.gov' <[Judson.Richard@epa.gov](mailto:Judson.Richard@epa.gov)>  
**Cc:** Hao, Cordelia@OEHHA <[Cordelia.Hao@oehha.ca.gov](mailto:Cordelia.Hao@oehha.ca.gov)>  
**Subject:** Tanguay lab data on dashboard- Activity Score

Hi Richard,

Hope you are doing well.

Monica referred me to you after I emailed her about getting some additional information on the Tanguay lab zebrafish data on the ToxCast Dashboard. Our student intern, Cordelia (CC-ed here), is working on a project using the zebrafish data, and we were able to get many of our questions addressed during a phone call this morning with Lisa Truong. From our conversation with Lisa, we learned that the Activity Score data were generated by the ToxCast team for the purpose of having a higher level/overall toxicity endpoint included. She mentioned that the Activity Scores were generated using percent activity for the all of the specific zebrafish endpoints. Would you be able to send us a more detailed description of how the Activity Scores were calculated for the Tanguay lab data?

Thanks much,  
Shoba

PS. We also have a call set up with Stephanie Padilla later this month to discuss the specifics of the NHEERL zebrafish data. We'll reach out to you if we have any Dashboard-specific questions that don't get addressed during our call with her.

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